D.—The Squirrels of the Tomeutes lokroides and MEARSI GROUPS.

BY OLDFIELD THOMAS, F.R.S. AND R. C. WROUGHTON.

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The receipt of the fine series collected by Mr. Mackenzie, I.F.S., on the Chindwin, and Messrs. Crump and Baptista, in Sikkim, has caused us, after a further examination, to modify the results before arrived at and recorded in Vol. XXIV, p. 224, et seq.

It is now clear that, while some classification is possible in dealing with the summer forms, in which the characteristic thigh-patch is present, the identification of specimens in winter pelage, when there is no thigh-patch, is often difficult or impossible.

The following is a key to the forms we are now able to recognize,

based on their summer pelage.

KEY.

- A. Feet dark grey, thigh-patches red... lokroides group.
 - a. No grey median line on chest and
 - abdomen ... lokroides lokroides (Hodgson. (Sikkim).
 - A grey median line on chest and abdomen
 - ... lokroides owensi, T. and W. (Upper Chindwin, East Bank.)
- B. Feet pale, thigh-patch white or buffy. mearsi group.
 - a. Thigh-patch pure white... ... mearsi virgo, subsp. nov. (Upper Chindwin, West Bank.)
 - Thigh-patch white edged by an b. ochraceous flush
 - ... mearsi bellona, subsp. nov. (Kin, Middle Chindwin.)
 - c. Thigh-patch buffy white ... mearsi mearsi, Bonhote. (Chinbyit, Lower

Chindwin.)

T. lokroides Group.

In the paper referred to above we recorded under the heading of Tomeutes lokroides, Hodgson: "Squirrels representing this long known Nepalese and Sikkim species occur all down the West Bank of the Chindwin The Upper Chindwin form does not at present appear to be separable from true T. lokroides. But about this we shall know more when the Society's Survey Collections from Sikkim arrive." Now that they have arrived we see that it is separable.

All the old specimens of *T. lokroides* from Nepal and Sikkim were undated and not exactly localised, but with the new material to help us, we are able to record that what has hitherto been known as *similis*, Gray, characterized by its reddish thigh-patch is in fact the summer pelage of *lokroides*, Hodgs. Consequently the form described as *T. similis owensi* (l.c.) must in future be known as *T. lokroides owensi*. It is interesting to note its location on the East Bank of the River, near its source. The other forms dealt with in the passage quoted above, all found on the West Bank of the Chindwin only, fall into the quite distinct *mearsi* group, dealt with under the next heading.

T. mearsi Group.

Bonhote described mearsi as a subspecies of lokroides and it has been so accepted until now. The abundant material we have just received, however, shows that there is a group of forms, inhabiting the West Bank of the Chindwin River, which possess in common certain distinctive characters separating them entirely from lokroides, notably the white feet, white thigh-patch and smaller skull, and we have been unable to detect any signs of intergrading between the two. Consequently mearsi may be accepted as a species.

Tomeutes mearsi, Bonh.

The name was based on a series of four specimens, including the type, taken by Col. Mears at a place called Chinbyit, which appears to be close to Monywa, on the Lower Chindwin, about 50 miles below Kin. Unfortunately the specimens are all in winter pelage, without thigh-patches. The general colour is a pale, grizzled grey, entirely without any trace of brown or red. In the collection received from Mr. Mackenzie are two specimens killed in October, of the same 'cold' pale grey colour, labelled "150 miles south of Kindat," which presumably is not far from the type locality of mearsi, and we, therefore, accept them as indicating, to some extent, the summer pelage of mearsi. They show pale buffy white thighpatches, evidently disappearing. Good specimens of mearsi, taken in full summer, at or near Monywa, are a great desideratum.

Tomeutes mearsi bellona, subsp. nov.

A fine series collected by Mr. Shortridge at Kin, and provisionally accepted by us (l.c.) as the summer form of *mearsi*, now requires a name. The following is a description of this form, of the winter pelage of which we have no example. A good series of winter specimens from Kin are very much to be desired and we hope some member will oblige.

Colour above grizzled black and yellow, giving the general appearance of olivaceous grey, the individual hairs ringed yellow and black. The posterior back and often the flanks as far as the forelegs washed with "orange rufous," the outside of the thighs entirely that colour with a white thigh-patch. Below "ochraceous buff." Forefeet grizzled like the head, hindfeet buff with a median grey line.

Dimensions of the type.—Head and body, 184 mm; tail, 176; hindfoot, 43.5; ear, 18.5. Skull.—Greatest length, 46; condylobasal length, 39.5; zygomatic breadth, 27; upper tooth row exclusive of p³, 8.7.

Hab.—Kin, Lower Chindwin River.

Type.—Adult male B. M. No. 15. 5. 5. 177. Original number 5453. Collected by Mr. G. C. Shortridge, on the 18th June, 1914. Presented to the National Collection by the Bombay Natural History Society.

Tomeutes mearsi virgo, subsp. nov.

This is the Upper Chindwin form (ranging from Kindat northwards to Hkamti) which, pending receipt of Sikkim specimens of true lokroides, we did not venture to separate from that species, but it is now clear that they belong to the mearsi and not to the lokroides group. The following is a description of this form, of which Mr. Shortridge obtained over 40 specimens in summer pelage and Mr. Mackenzie has now sent nearly 30 of the winter form.

General colour above a grey grizzle (the individual hairs ringed white and black) slightly tinged with brown in the winter, much more markedly so in the summer form. This latter with a pure white thigh-patch below buff. The feet like the ground colour of the body in winter, but much paler, usually buffy white, in the

summer form.

Dimensions of the type.—Head and body, 180; tail 160; hindfoot, 43; ear, 20. Skull.—Greatest length, 48; condylo-incisive length, 42; zygomatic breadth, 28.5; upper tooth-row exclusive of p³, 8.2.

Hab.—Upper Chindwin (West Bank) from Kindat to Hkamti.

(Type from Tatkon).

Type.—Adult male B. M. No. 15.5.5.169. Original number 5629. Collected by Mr. G. C. Shortridge on the 5th July, 1914. Presented to the National Collection by the Bombay Natural History Society.

To make clearer these changes in determination, we may recapitu-

late that our previous

T. lokroides lokroides from Nepal = T. lokroideslokroides (Winter).

T. lokroides lokroides from Upper

... ... T. mearsi virgo (Summer). Chindwin

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T. similis from Nepal = T. lokroides lokroides (Summer).

T. similis owensi T. lokroides owensi.

T. lokroides mearsi = mearsi mearsi and m. bellona.

E.—A NEW FLYING SQUIRREL FROM TENASSERIM.

BY OLDFIELD THOMAS.

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Among the Flying Squirrels obtained for the Survey by Mr. G. C. Shortridge in Tenasserim is one which is so like the examples he obtained there of *Pteromys* (*Hylopetes*) belone that it was not distinguished from them until recently. Now, however, examination shows that it is not a *Hylopetes* at all, but a most distinct species of the subgenus *Petinomys* and therefore in no way related to *P. belone*. It may be called

Pteromys (Petinomys) phipsoni, sp. n.

A Petinomys with the general look of P. (Hylopetes) belone, though the size is smaller.

General colour above blackish slaty, washed with fulvous or cinnamon, which becomes deeper and richer on the posterior back. Under surface cream-buff, whiter mesially. Top of muzzle and crown slaty greyish with fine buffy tips to the hairs; eyes with a broad deep black line running along above them from the base of the ears to the roots of the whiskers, a narrower black line edging them below. Below this narrow black line the cheeks are bright ochraceous-buffy, this colour passing down on the sides of the throat and chest, where it fades into the general cream-buff of the under surface; the middle line of the throat white. Ears very small, with tufts of long black hairs, twice the length of the ears, growing from their anterior and posterior bases. Hands and feet dark brown above, cream-buff on the inner sides of the wrists and Tail distichous, dull buffy for its basal inch above, then smoky brown darkening to black at the end; below the basal inch is buffy, then the sides are mixed buffy and brown, the buffy then disappearing and the terminal half being black; middle line of vertebræ buffy, edged with dark brown.

Skull with all the characteristics of *Petinomys*, the brain-case broad, smooth and strongly bowed, the profile very convex upwards; bullæ large, triangular, flattened, very different to the round inflated bullæ of *Hylopetes*.